

[illegible]

SOURCE DATA CAPTURE UNIT 10
SOURCE DATA IMAGE DISPLAY 11
INPUT --> PARAMETER DATA INPUT MEANS 12
DATA ADJUSTMENT PROCESSOR 13
MAIN CONTROLLER 14
LOGO DATA IMAGE DISPLAY 15
LOGO DATA OUTPUT MEANS 16

PICTURE, PHOTOGRAPH, OR OTHER IMAGE 80
 LOGO EDITING TOOL 2
 SOURCE DATA 3
 LOGO DATA GENERATING APPARATUS 4
 PRINTER 60
 IMAGING EDITING TOOL 81
 IMAGE FILE 82
 BITMAP FILE 83
 LOGO REGISTRATION FILE 5
 POS TERMINAL HOST SYSTEM 50

IMAGE DATA CAPTURING MEANS 31
IMAGE DATA STORAGE 32
IMAGE DATA PROCESSOR 33
TEXT DATA EDITOR 34
IMAGE DRAWING UNIT 35
DATA MERGING UNIT 36
SOURCE DATA OUTPUT UNIT 37
EDIT INPUT UNIT 38
IMAGE DATA DISPLAY UNIT 39

SOURCE DATA CAPTURE UNIT 10
SOURCE DATA IMAGE DISPLAY 11
PARAMETER DATA INPUT MEANS 12
DATA ADJUSTMENT PROCESSOR 13

MAIN CONTROLLER 14
LOGO DATA IMAGE DISPLAY 15
LOGO DATA OUTPUT MEANS 16
IMAGE REDUCTION PROCESSOR 17

FIG. 5

SOURCE DATA CAPTURE UNIT 10
SOURCE DATA IMAGE DISPLAY 11
PARAMETER DATA INPUT MEANS 12
DATA ADJUSTMENT PROCESSOR 13
MAIN CONTROLLER 14
LOGO DATA IMAGE DISPLAY 15
LOGO DATA OUTPUT MEANS 16
IMAGE REDUCTION PROCESSOR 17

FIG. 6

DATA ADJUSTMENT PROCESSOR 13
REGISTRATION COMMAND SET GENERATOR 22
PARAMETER INPUT COMMAND SET GENERATOR 24
PORT DETECTION COMMAND SET GENERATOR 25
TRANSMISSION COMMAND SET GENERATOR 26
LOGO REGISTRATION FILE GENERATOR 27
INTERFACE 21
--> TO STORAGE OR RECORDER
--> TO TRANSMISSION LINE

FIG. 7

LOGO EDITING PROCESS
S101 READ IMAGE DATA?
S102 READ AND STORE
S103 DRAWING, TEXT INPUT?
S104 DRAWING, TEXT INPUT PROCESS
S105 CHANGE SIZE AND MERGE IMAGE AND TEXT OBJECTS
S106 END INPUT?
S107 OUTPUT SOURCE DATA
END

FIG. 8

SOURCE FILE REFERENCE

PRINTER DATA

NAME

PAPER WIDTH

COLOR 1

COLOR 2

RESOLUTION

VERTICAL

HORIZONTAL

COMMUNICATIONS

PORT

BAUD RATE

BIT LENGTH

PARITY

FLOW CONTROL

PROPERTIES

NEW PREVIEW

SAVE TO FILE

MEMORY MANAGEMENT

EDIT TEST PRINT

SAVE TO PRINTER

QUIT

FIG. 9

FILE

EDIT

DISPLAY

TOOLS

READY

FIG. 10

COORDINATES

PLEASE INPUT THE LOGO SIZE.

WIDTH (W): 512 DOTS

HEIGHT (H): 341 DOTS

OK

CANCEL

FIG. 11

TEXT PROPERTIES

FONT

STYLE

SIZE

OK/CANCEL

STANDARD

ITALIC

BOLD

BOLD ITALIC

SET TEXT COLOR

ATTRIBUTES

SAMPLE

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OVERSTRIKE
UNDERLINE
ROTATE 0 DEGREES

FIG. 12

IMAGE PROPERTIES OK/CANCEL

FILE NAME

PREVIEW DRAWING MODE

OPAQUE

TRANSPARENT

FIT TO PAPER

FIG. 13

COORDINATES OK/CANCEL

START COORDINATES

END COORDINATES

FIG. 14

CREATE LOGO

S201 CAPTURE SOURCE DATA (SELECT FILE)

S202 DISPLAY IMAGES OF SOURCE DATA AND LOGO DATA

S203 OBJECT SELECTED?

S204 READ AND DISPLAY OBJECT

S205 IMAGE PROCESSING PARAMETERS INPUT?

S206 PROCESS OBJECT

S207 DISPLAY OBJECT AFTER PROCESSING

S208 OUTPUT LOGO?

S209 SAVE SETTINGS?

S210 OUTPUT LOGO DATA

END

FIG. 15

SOURCE FILE REFERENCE

PRINTER DATA

NAME

PAPER WIDTH

COLOR 1

COLOR 2

RESOLUTION
VERTICAL
HORIZONTAL
COMMUNICATIONS
PORT
BAUD RATE
BIT LENGTH
PARITY
FLOW CONTROL
PROPERTIES
OBJECT
HALFTONE
COLOR REDUCTION
BRIGHTNESS
GRAY SCALE
COLOR BLACK
NEW PREVIEW SAVE TO FILE MEMORY MANAGEMENT
EDIT TEST PRINT SAVE TO PRINTER QUIT

FIG. 16

PROPERTIES
OBJECT TEXT 2
TEXT ABC TRADING
COLOR BLACK

FIG. 17

CONVERT 8 COLOR DATA TO 15 COLORS
PRINT COLOR
COLOR 1 COLOR 2
BLACK RED
SOURCE DATA
PREVIEW
COLOR ASSIGNMENT
BLACK
BLUE
RED
MAGENTA
GREEN

CYAN
YELLOW
WHITE

CONVERT 8 COLOR DATA TO 3 COLORS

PRINT COLOR

COLOR 1

COLOR 2

BLACK

RED

SOURCE DATA

PREVIEW

COLOR ASSIGNMENT

BLACK	FIRST	SECOND
BLUE	FIRST	SECOND
RED	FIRST	SECOND
MAGENTA	FIRST	SECOND
GREEN	FIRST	SECOND
CYAN	FIRST	SECOND
YELLOW	FIRST	SECOND
WHITE	FIRST	SECOND

FIG. 18

SLIDER 251

FIG. 19

PRINTER MEMORY MANAGEMENT

NV GRAPHIC KEY CODES

LIST KEY CODES 261

SELECT ALL

CLEAR SELECTION

PRINT

DELETE

CLOSE

FIG. 20

GENERATE LOGO REGISTRATION FILE

S310 CREATE LOGO DATA

S330 GENERATE COMMAND DATA SET

S340 GENERATE LOGO REGISTRATION FILE

S350 OUTPUT LOGO REGISTRATION FILE

END

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FIG. 21

S330 GENERATE COMMAND DATA SET
S331 GENERATE REGISTRATION COMMAND SET
S332 ADD DATA TRANSMISSION COMMAND SET?
S333 GENERATE DATA TRANSMISSION COMMAND SET
S334 INCLUDE PORT DETECTION COMMAND SET?
S335 GENERATE PORT DETECTION COMMAND SET
S336 GENERATE PARAMETER INPUT COMMAND SET
TO S340

FIG. 22

S340 GENERATE LOGO REGISTRATION FILE
S341 ADD REGISTRATION COMMAND SET
REGISTRATION COMMAND || LOGO DATA
S342 DATA TRANSMISSION COMMAND SET DETECTED?
S343 PORT DETECTION COMMAND SET DETECTED?
S344 ADD PORT DETECTION COMMAND SET
S345 ADD DATA TRANSMISSION COMMAND SET
DATA TRANSMISSION COMMAND SET || REGISTRATION COMMAND SET ||
LOGO DATA
S346 ADD PARAMETER INPUT COMMAND SET
TO S350

FIG. 23

APPLICATION 70
CONTROL OBJECT (CO) 71
SERVICE OBJECT (SO) 72
OPERATING SYSTEM (WIN) 73
DEVICE (POS PRINTER) 74

FIG. 24

COLORS 401
COLOR CONVERSION METHOD
 FIXED
 BRIGHTNESS
 BRIGHT DARK
COLOR

COLOR 1
 BLACK
COLOR 2
 BLACK
OK CANCEL APPLY

FIG. 25

SOURCE DATA CAPTURE UNIT 10
SOURCE DATA IMAGE DISPLAY 11
LOGO DATA IMAGE DISPLAY 15
PARAMETER INPUT --> PARAMETER DATA INPUT MEANS 12
TEMPORARY SOURCE DATA BUFFER 6
IMAGE PROCESSING MEANS 7
OBJECT READ/WRITE CONTROLLER 8
LOGO DATA STORAGE 9
DATA ADJUSTMENT PROCESSOR 13
MAIN CONTROLLER 14
LOGO DATA OUTPUT MEANS 16

FIG. 27

IMAGE DATA OR OBJECT --> IMAGE DATA STORAGE 46
HALFTONE PROCESSOR 47
GRAY SCALE IMAGE MEMORY 48
COLOR SELECTION INPUT --> COLOR ASSIGNMENT PROCESSOR 49 -->
OUTPUT
CONTROL SIGNAL

FIG. 28

SOURCE DATA 3
IMAGE PROCESSING (COLOR REDUCTION) 56
IMAGE REDUCTION PROCESS 57
TO PRINTER OR OUTPUT FILE
IMAGE DISPLAY 58
SOURCE DATA IMAGE LOGO IMAGE

FIG. 29

LOGO DATA CREATION
S401 CAPTURE SOURCE DATA

S402 SOURCE DATA REDUCTION PROCESS
S403 DISPLAY SOURCE DATA IMAGE
S404 IMAGE PROCESSING PARAMETER INPUT
S405 IMAGE PROCESS SOURCE DATA A
S406 IMAGE PROCESS REDUCED IMAGE A
S407 SAVE PARAMETERS?
S408 OUTPUT LOGO DATA

FIG. 30

IMAGE 1 IMAGE 1'
IMAGE 2 IMAGE 2'
PROPERTIES
 OBJECT IMAGE 2
 IMAGE 1
 HALFTONE
 COLOR REDUCTION METHOD
 COARSE FINE
 BRIGHTNESS
 BRIGHT DARK
 GRAY SCALE
 COLOR BLACK

FIG. 31

PROPERTIES
HALFTONE
 COLOR REDUCTION METHOD
 COARSE FINE
 BRIGHTNESS
 BRIGHT DARK
 GRAY SCALE
 COLOR BLACK

FIG. 32

TWO-COLOR PRINT DATA GENERATOR 101
HOST 102
TWO-COLOR PRINTER 103
HOST [TWO-COLOR PRINT DATA GENERATOR] --> TWO-COLOR PRINTER
HOST --> TWO-COLOR PRINTER [TWO-COLOR PRINT DATA GENERATOR]

HOST [TWO-COLOR PRINT DATA GENERATOR] --> TWO-COLOR PRINTER
[TWO-COLOR PRINT DATA GENERATOR]

FIG. 33

COLOR-REDUCED IMAGE DATA GENERATOR 201
COLOR CONVERSION UNIT 202
PRINT DATA CONVERSION UNIT 203
HOST --> COLOR CONVERSION SELECTION UNIT 204
PRINT DATA GENERATING UNIT 205
HOST --> FULL-COLOR DATA STORAGE 211
REDUCED-COLOR IMAGE DATA MEMORY 212
COLOR-CONVERTED IMAGE DATA STORAGE 213
PRINT DATA MEMORY 214 --> TWO-COLOR PRINTER
SETTINGS STORAGE 215

FIG. 34

FULL-COLOR IMAGE
COLOR REDUCTION PROCESS
REDUCED-COLOR IMAGE
 RED, GREEN, BLUE, CYAN, MAGENTA, YELLOW, BLACK, WHITE
COLOR CONVERSION PROCESS
COLOR-CONVERTED IMAGE
 RED: SECONDARY COLOR
 BLACK: MAIN COLOR
 WHITE: BACKGROUND COLOR

FIG. 35

COLOR
 K (= BLACK)
 B (= BLUE)
 G (= GREEN)
 C (= CYAN)
 R (= RED)
 M (= MAGENTA)
 Y (= YELLOW)
 W (= WHITE)
R (= RED)
G (= GREEN)

B (= BLUE)

MAIN COLOR K (= BLACK) B (= BLUE)

SECONDARY COLOR R (= RED) R (= RED)

K (= BLACK) B (= BLUE)

R (= RED) R (= RED)

R (= RED) R (= RED)

R (= RED) R (= RED)

R (= RED) R (= RED)

R (= RED) R (= RED)

R (= RED) R (= RED)

W (= WHITE)W (= WHITE)

FIG. 36

TWO-COLOR PRINT DATA GENERATING PROCESS

S501 GET FULL-COLOR IMAGE DATA

S502 COLOR REDUCTION PROCESS

S503 STORED REDUCED-COLOR IMAGE DATA

S504 GET COLOR CONVERSION PROCESS SETTINGS

S505 DETERMINE COLOR CONVERSION METHOD

FIXED CONVERSION

S506 GENERATE COLOR-CONVERTED IMAGE DATA USING FIXED
CONVERSION METHOD

S507 STORE COLOR-CONVERTED IMAGE DATA

S508 GENERATE TWO-COLOR PRINT DATA

S509 STORE TWO-COLOR PRINT DATA

ADJUSTABLE CONVERSION

S514 GENERATE COLOR-CONVERTED IMAGE DATA USING ADJUSTABLE
CONVERSION METHOD

S515 STORE COLOR-CONVERTED IMAGE DATA

S516 GENERATE TWO-COLOR PRINT DATA

S517 STORE TWO-COLOR PRINT DATA

END

FIG. 37

SETTING COLOR CONVERSION PROCESS PARAMETERS

S601 SET MAIN COLOR AND SECONDARY COLORS

S602 SET COLOR CONVERSION METHOD

S603 DETERMINE COLOR CONVERSION METHOD

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VARIABLE CONVERSION

S605 SET CONVERSION PROCESS PARAMETERS

FIXED CONVERSION

S606 STORE COLOR CONVERSION PROCESS PARAMETERS

END

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